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GENESEE FARMER.

SATURDAY, MARCH 18, 1837.

Brief Hints for March.

Before spring opens, the farmer should attend to the performance of whatever can be done *now*, and which may prevent interruption in the busy season of the year. Wood should be drawn, cut and corded; rails split and drawn where needed, corn selected and shelled, and tools repaired.

Where there will probably be a deficiency of tools, it may be now conveniently supplied; and in procuring new tools care should be always taken to get the *best*, even though they may cost a little more. Where a man can do one third more work by using a good tool, he will soon pay for the additional expense.

A common but expensive mode of raising calves, is to suffer them to suck the cow. The practice which not unfrequently occurs, of suffering calves to run constantly with the cow, should be strongly reprobated, as the milk is drawn irregularly, and not often clean, and the cow is consequently soon spoiled. Where the calf sucks regularly, and the milk is drawn completely from the udder, the *expense* should deter from the practice, as the milk will be worth more during the season, than the calf in the autumn. But if the calf is soon weaned to obtain the the milk, a good animal cannot be obtained, but poor, stunted, ill shaped calves will be produced.

A good way to raise calves, is to let them suck the cow a few days, then let them suck the finger in a pail of new milk until they learn to drink, then mix a small quantity of water with the milk, at the same time adding meal and mixing it, and then gradually substituting water and meal for milk, until the milk is entirely discontinued. Thus sudden changes are avoided, which are always injurious to calves. Warmed skimmed milk may be used in place of new milk, after the first few days.

Calves, as well as other animals, should have a good supply of clean litter.

Milk your cows clean, if you do not wish to spoil them. Sore teats may be prevented by washing them each time before milking with water.

Working cattle and horses must be kept in good order, that they may perform labor efficiently in the spring. It is better to give animals extra feeding, if by doing so they can do twice as much work, and consequently enable the man who drives them to do twice as much.

Clover seed may be sown any time during this month, and when the season of freezing and thawing the soil arrives, they will be gradually worked into the ground by the operation. This is found by repeated experiment to be better than to defer it till the ground becomes settled in spring.

Pruning the raspberry should be performed as soon as the snow is off the ground in the spring. Clear away the old stems, cut away the small shoots, and leave four or five of the largest and strongest of last season's shoots in each bunch, for the next crop. These should be cut off to three or four feet high, and tied to stakes driven in the ground to keep them erect. Early in the spring the ground should be cleared of grass and weeds, and loosened about them.

Grafting plasters may be now made, and we have found the cheapest and by far most convenient material to spread the wax upon, to be brown paper. A sheet may be covered by spreading the wax with a knife, and then cut by scissors into plasters of the required size.

Grafting wax may be made by melting together the following substances: 2 parts tallow, 2 beeswax, 4 rosin; or, 3 rosin, 3 beeswax, 1 tallow; or, 4 parts pitch, 4 rosin, 2 beeswax, 1 hog's lard, 1 turpentine.

Farmers often suffer much at this season from wet feet, we therefore request leave to recommend them to the India rubber application described in the tenth number of the last vol. of the Genesee Farmer, the knowledge of which, an esteemed friend assures us, is worth twenty dollars to him. For those who have not that number at hand, we will briefly repeat the mode of making it. Melt one pound of tallow in an iron kettle, add from four to six ounces of India rubber cut small, and heat the melted tallow until the India rubber in it is dissolved. It will then be fit for greasing boots and shoes, and will render them perfectly impervious to water, though in it all day. During the preparation of this mixture it will boil up in foam, and send off copious pungent fumes, but this does not injure it. One twentieth part of bees wax improves it. Old worn out India rubber over shoes may be used in the manufacture.

As system and looking ahead, is indispensable to success in farming, we wish to repeat a recommendation of last year for making a memorandum book. Provide a small blank book with a flexible leather cover, that it may be conveniently carried in the pocket, and appropriate one page to each week in the season; set down every think on its proper page, which is to be done at the time denoted. By having this book constantly in the pocket, many things may be noted down the moment they occur to the mind, either during reading or otherwise, which without this would be forgotten and neglected. Further, provide another similar book, and note down in it briefly, during the progress of the season, whatever work is done at the time, with hints of such improvements as may occur. This will form an excellent memorandum book for the next season. Thus the farmer has every thing in black and white before him; he sees his business at one view, and he makes his arrangements accordingly, without unforeseen and unexpected interruptions.

Climate of the West.

We believe that the opinion is generally entertained in this and the eastern states, that the climate, in proceeding from east to west on the same parallel of latitude, grows more mild as we recede from the Atlantic until we reach the Pacific; and the instances are not unfrequent in which individuals and families leave pleasant homes in the Atlantic states, and emigrate to those of the west, under the expectation of finding a country free from the cutting blasts of the eastern winter wind. This opinion of a mild and more equal temperature in the Mississippi Valley than in the Atlantic states is an error, which the experience of the present winter will go far to dissipate.

Long continued observations made at the military posts, and in other positions both of the east and west, prove beyond a doubt, that on any given parallel of latitude, the climate is both hotter and colder in the course of the year in the western country, than it is on the Atlantic. In the summer the country west of the Alleganies is hotter than it is east of these mountains, as it is shut out from the effect of the sea winds that have an effect on the eastern side far into the interior, and in the winter the cold north winds from the Arctic sea, or the west ones from the snowy ranges of the Rocky mountains, sweep over the immense plains and frozen earth without meeting any cause to raise their temperature or diminish their violence. In the Atlantic states the influence of these causes is rarely felt, or if they are the intensity of the cold is diminished by the open sea, and the vast column of warm water flowing constantly from the tropics, in the gulf stream, along our shores. Experience and observation has also shown that the thermometrical range is greater on the Mississippi than on the sea coast, and it is well known that vicissitudes of weather are always felt in exact proportion to their suddenness and extent.

From letters and from papers which describe the sufferings of the citizens, principally the new settlers on the western prairies of Indiana, Illinois and other places, it is evident the season there has been one of unusual severity. The degree of cold has far exceeded any thing felt in the coldest sections of Western New-York, unattended by the causes which have here mitigated its violence or limited its duration. Rochester and Chicago may be selected as two points of observation, and it will be found that the average temperature for the month of January, is at least fifteen or twenty degrees lower at the latter than at the former place. It is believed that more deaths from freezing, and more cases of suffering from frozen limbs, have occurred the present winter, from Wisconsin to Arkansas, than has occurred in the whole east for three years past. There has been less snow than with us it is true, but the earth has been frozen to the depth of two feet; and the piercing nature of the winds rushing over such an extent of congealed surface, unchecked by mountains and unbroken by forests "must be felt in order to be appreciated."

The effect of this state of temperature at the west will be easily understood, so far as it regards the interests of the farmer, or its influence on the valetudinarian. There can be no doubt that on the same parallel the western region is better for corn than the eastern one; and the same rule will hold good for all annual plants and vegetables that require a high temperature in the summer months to bring them to perfection. Potatoes, however, will not do so well in the west as the east, and Maine or Nova Scotia will produce roots of a finer quality, and in as great quantity as the far richer prairies of the West. The moister air and equalizing temperature of the sea in the east, and the liability to drouth in the west, sufficiently explains this. Wheat will grow in either section; it remains to be seen whether, as the soil is more cultivated at the west, the liability to freeze out will increase, as it evidently does in many sections of the country east of the Alleganies. Perennial plants which require a high temperature through the year, will survive our winters in the open air much further north on the sea coast than on the Mississippi. For instance the passion flower, Spanish trumpet flower, and some of the palms will flourish at Norfolk in Virginia, in the open air, several degrees further north than they can be found west of the mountains.

We think, therefore, that those who expect to find perpetual summer in the great valley, will be sorely disappointed; that those who wish to raise large quantities of corn with certainty and comparative ease will there be gratified; that potatoes and similar esculent roots are better here than there; and that wheat can at present be grown there as well, or in greater quantities than with us; though whether the facility of production will eventually compensate the distance from market, remains yet to be seen.

☞ We publish the communication of "Van Buren," not so much from any thing new which it contains, as from a wish to satisfy doubts on this subject. Statements similar to this have been frequently presented to our readers, and again and again we have furnished the reasons for the belief that transmutation is impossible. Though we do not wish to prolong the controversy, we shall briefly give what we regard as the chief reasons of the fallacy of the conclusions of our correspondent. We shall first premise that chess and wheat not only belong to different species, but to different genera; and that among the whole vegetable kingdom, notwithstanding the researches of hundreds of eminent men, there has not been found a single instance of a change of one species into another, much less of one genus to another. So strong is the

proof against such change, which has been accumulated, that it would require a thousand times the evidence which has been brought forward on the opposite side, to overthrow it; and consequently the burden of the proof of transmutation, still rests with its advocates.

Our correspondent mentions several instances of change in *varieties* of plants and animals in proof of his position; but change in *variety* is very common, but in species and genera, entirely unknown, and therefore the reasoning is wholly inapplicable. The same reasoning might with equal propriety be brought to show, that horses changed to cows, and sheep to pigs. The only fact in the first instance of supposed transmutation, favoring such opinion, which our correspondent gives, is, that the chess *appeared in patches*. It would be impossible for us, knowing nothing of the circumstances, to assign with confidence the reason; but we may state how it *might* occur, without resorting to the notion of the change of one plant into another. We shall first mention some of the ways in which chess becomes mixed with wheat. We have observed that what is commonly called *very clean* seed wheat, may generally be found on close examination to contain a large quantity of chess, often 1500 or 2000 to a bushel, but being small, it escapes observation. Again, the grains being hard and small, escape the teeth of cattle, and are scattered over fields in manure. Again, chess is a very hardy plant, and thrives in all situations; when growing among other plants and shaded by them, it is small, and propagates itself year after year, unobserved. This we have seen to take place in meadows. But when allowed sufficient room it grows luxuriantly, so that a single grain will sometimes produce many thousand seeds in one season. Thus, chess is spread abundantly in three ways—unobserved in wheat, by animals, and by propagation. Hence there are few farms which do not abound with it. And hence when wheat is destroyed by animals or by winter, (the chess being small and hardy and therefore escaping,) the chess springs up and occupies the whole ground. In the case alluded to by our correspondent the wheat was evidently killed by some unknown cause, and the chess took its place.

One of the insurmountable objections against transmutation, is the fact that fields and even whole districts of country have been completely cleared from this weed; for instance, see Genesee Farmer, volume 5, page 374; volume 6, pages 217 and 391. But there are so many ways for this weed to spread, that it requires years of close personal care to extirpate it completely, and without thorough work will never be eradicated. There must be something brought forward much more decisive in favor of transmutation than has been yet done, to establish that opinion; all, as yet, is indecisive and uncertain. But careful investigation requires more patience than to jump at once to a conclusion; and many prefer adopting at once an erroneous opinion, to patient inquiry.

The Best Soil.

The *ne plus ultra* of a good soil, is one which contains so much sand that it will not bake by wetting and drying, and which also contains as great a portion of clay as is admissible with the former requisite. Sand prevents baking, and clay absorbs and retains water and nutricious substances, and the best soil is one where the good qualities of both are united to the greatest possible extent. Of course it is to be understood that such a soil is to contain the requisite quantity of lime, and animal and vegetable matter.

Culture of Ruta Baga.

J. M. Lawton in the Cultivator, gives the following as the best plan for the culture of the Ruta Baga. His conclusions are founded upon the results of many experiments pursued for a course of years:

1st. The land properly adapted to the nature of the plant is a strong loam. 2d. The land should be well ploughed early enough in the spring to have the sward rot by the 10th June. 3d. The land should be made perfectly mellow and smooth, and a good coat of manure, that is fine, say sheep or barn manure, should be put on. 4th. Throw the land into ridges 24 inches apart, with a small horse plough. 5th. After the ridges are rolled down a little by some light roll, say a straight cask with a shaft through the middle, and a horse attached to it—put in the seed on or about the 15th of June; the seed should be put in ten inches apart the way the ridges go. 6th. After the plants are large enough to dress, be careful to have one plant in every hill, and only one. 7th. Dress them three times properly, and plaster them three times, say when they are breaking the ground, and after each of the two first hoeings.

I have found the above rules, closely followed, have never failed to produce a good crop; the last year I raised from 90 rods of ground 605 bushels of sound close grained ruta baga turneps. It was on land a distance from the house or barn, and never had to my knowledge a spoonful of manure on it until a few days before I put the seed in the ground.

Prices of Flour.

The following table which we copy from the Pennsylvanian, gives a comparative view of the price of flour in Philadelphia, for the first three months in the year, from 1796 to the present time. The editor of the Pennsylvanian states that it is carefully and accurately prepared. Some of our readers will be surprised to see that, at periods when labor did not obtain more than half the price it now commands, flour was sold at much higher prices than those which are now complained of. In 1796, for instance, it sold as high as fifteen dollars a barrel.

Prices of flour for the three first months of the year, from 1796 to 1837, inclusive.

Years.	January.	February.	March.
1796	$12 00	13 50	15 00
1797	10 00	10 00	10 00
1798	8 50	8 50	8 50
1799	9 50	9 50	9 25
1800	11 50	11 25	11 50
1801			
1802	7 00	7 00	7 00
1803	6 50	6 50	6 50
1804	7 50	7 50	7 00
1805	11 00	12 25	13 00
1806	7 50	7 50	7 00
1807	7 50	7 50	7 5
1808 (Embargo)	6 00	5 75	5 50
1809 do.	5 50	7 00	7 00
1810	In July and August this year, $11 and $12.	7 75	8 00	8 25
1811	11 00	10 50	10 50
1812 (War)	10 50	10 12	9 75
1813 do.	11 00	10 00	9 50
1814 do.	9 25	8 25	8 00
1815 do.	8 00	8 00	7 75
1816	9 00	9 00	8 00
1817	13 50	13 75	14 25
1818	10 00	10 75	10 50
1819	9 00	8 75	8 25
1820	6 00	5 50	5 00
1821	4 00	4 00	3 75
1822	6 25	6 25	6 25
1823	7 00	6 75	7 00
1824	6 00	6 00	6 12
1825	4 87	5 12	5 12
1826	4 75	4 62	4 50
1827	5 75	6 00	5 75
1828	5 00	4 87	4 75
1829	8 50	8 25	8 00
1830	4 62	4 50	4 50
1831	6 12	6 25	7 00
1832	5 50	5 50	5 50
1833	5 75	5 00	5 50
1834	5 25	5 00	5 87
1835	4 87	5 00	5 00
1836	6 50	6 62	6 75
1837	11 00	11 00	

Extraordinary Experiment.—The Professor Locke of the Medical College of Ohio, has invented a Thermo-Electric Instrument of such delicacy and power, that by the electricity generated by the warmth from the touch of the finger, a magnetic needle eleven inches long and weighing one and a half ounces, suspended like a compass needle, is not only deflected but made to rotate rapidly and repeatedly round. This is the more surprising as the electric conductor does not touch the needle, but passes one fourth of an inch from it. Perhaps so much motion has never been produced by so little heat. A description of the instrument may be expected in Silliman's Journal.—*Cincinnati Repub.*

Economy of Agriculture.

Few subjects require more accurate calculation than those which belong to the economy of agriculture. The readers of the New England Farmer, and there are probably few members of this Society, who do not come within that description, will recollect a paragraph contained in that paper a few weeks since, stating the result of a calculation that had been made between having bars, or a gate for our inclosure, by which it was proved that if the bars were to be taken down once a day for one year, the time would pay for three gates. This is a specimen of the computations that are to be made under this head. They are not questions of mere curiosity, but they result in realities of profit or loss. Suppose also the instance of a plough: it will last several years, but it is of inferior construction will not do good work, and requires the application of more strength than another that might be obtained. Shall he continue to use it, or shall it be disposed of at any sacrifice? Without a knowledge of the structure of ploughs, and without a practiced judgment, the farmer may never discover its defects, or should he make the discovery and attempt an exchange, he may obtain another just as defective. Without information, he will not know the latest improvements. In order to decide correctly, he should understand precisely the defects of the old implement, what change in its construction would adapt it to his own land, and the comparative advantages of a new one, and the expense of an exchange. If he means to conduct his business with certainty, he will make these calculations, and not leave the result to time and chance; to the time when *by chance* he may bargain with a neighbor for a plough still worse perhaps than his own, or until it is worn out; and the chance that it may require extra labor equal to the whole amount of what would otherwise have been his clear profits, and effecting in the end a dimunition of his property to many times its value. The manufacturer rejects without a moment's hesitation, machinery found to be defective, and supplies its place by the best that can be fabricated.

Such are a few of the instances which may illustrate the necessity for the co-operation of mind and body in the conduct of a farm. That the mind is strengthened by exercise, and that whenever it may be exercised, it may distinguish itself by superior strength and information, are positions too plain to admit of proof or illustration. The earth yields or witholds her fruits, makes them stinted or luxuriant, by the operation of fixed laws. It can need no argument to show that he, whose dependence is on the favorable operation of these laws, should have all the knowledge of them that can be acquired, and of all the means by which their favorable operation may be propitiated. If the cultivator has a full knowledge of the qualities of soils, of seeds, of manures, of plants, of roots, of animals, and of all the influences that benefit or injure them, Nature is his counsellor and fellow laborer. All her powers are to him as labor saving machines. She diminishes for him the cost of her productions. She crowns with plenty and with gladness the devotee whose love has led him to study her character and honor her affections. All cultivation is but an awakening and bringing into use, powers that would otherwise lie dormant. If we consider that no limit has yet been found to the products of agriculture, but that they have continued to increase with the progress of art, and that one discovery commonly leads to another, we may well conclude that there are powers in nature not yet awakened, combinations not yet formed, and that many fields yet remain, for the conquests of agricultural genius.—*Hazen's Address.*

Munificent Bequest.

The late John Lowell, Jr., Esq., of Boston, who died a few months ago near Bombay, left property to the amount of more than half a million of dollars. We learn by the Boston Gazette, that he has bequeathed one half of his property, to trustees, to be appropriated to found an Institution in Boston, for the purpose of the delivery of lectures on scientific subjects. With the exception of one or two private legacies we also learn that he has left the other half of his large fortune to be equally divided between a brother, a brother-in-law and a sister-in-law.

Premium Crop of Barley.

The undersigned, William Carter, of Fitchburg, in the State of Massachusetts, presents himself as a claimant for the premium of the Massachusetts Society for the promotion of Agriculture, for the greatest quantity of Barley on one acre of land the present year, and gives the following statement respecting the same. The piece of land on which the above named crop of Barley was raised, was ploughed from the green sward, in the fall of 1834, and planted in the spring of 1835, with Indian corn, and yielded but an ordinary crop. The manure used the last year, was fermented manure in common quantity, dropped in the hill. The last spring it was in the hill as it was left when the corn was taken off, and first split with the plough, and then was cross-ploughed, and four bushels of the common two rowed Barley was sown on the furrow, and harrowed in, it was then sowed with grass seed, and rolled with a common roller. No manure of any kind was used on the land the present season. It was sown the first of May, and harvested the middle of August, threshed the last of October, and the crop was ascertained by actual measurement to be fifty-nine bushels. The entire expense of cultivation was,

Ploughing, - - - - - - -	$3,00
Harrowing, - - - - - - -	1,00
Seed, 4 bushels, - - - - - -	4,00
Harvesting, - - - - - - -	3,00
Threshing, &c. - - - - - -	5,00
	$16.00

The seed was sown by John Stickney, who also assisted to harvest, and measured the whole crop, whose certificate is subjoined. I also enclose the certificate of Philip Flowdin, Surveyor, as to the quantity of land. WM. CARTER.

Premium Crop of Rye.

SIR:—Noticing a premium offered by the Massachusetts Agricultural Society, for the greatest quantity of Rye raised on an acre, the following is an account of a crop of rye that I raised on about five acres of land in one piece, and harvested in July, 1836. The land was broken up in the autumn of 1832, a part of which was ploughed at the cattle Show in that year. In the spring of 1833, the land was not ploughed, but was well harrowed and manured in the furrow with about 20 cords of compost manure, part bone manure, and part from the yard of our barn; then planted with corn, potatoes and vegetables for the market. The land was ploughed in the autumn of 1833, and in the spring of 1834, I manured with a compost of about eight cords from the slaughter yard, with which was mixed about 3 cords of swamp mud, that was carted into said yard the year previous. About one cord of loam, and about 150 bushels of leached ashes, the remainder was stable manure, in all about twenty-five cords. Being all worked together, then spread, ploughed, harrowed and furrowed, and planted as the year previous. In the autumn of 1834, the land was well ploughed with one of Howard's ploughs. In the winter following, I commenced getting my manure on the land of which I should judge not far from 30 cords similar to the preceding years. In the spring, I commenced spreading the manure, then ploughed, harrowed, furrowed and planted as before stated. In September, 1835, the crop being all removed, I commenced ploughing the same, and on the first week in Oct., I sowed on said five acres of land in 1 day and two hours, twelve bushels of Rye with grass seed; the land was then harrowed and bushed, and in July, 1836, I harvested the rye that grew on said five acres, all being in one piece, and when threshed and clear from chaff, measured up 178 1-2 bushels, making an average of about thirty-five bushels to the acre. The entire expense of cultivation is estimated at sixty-three dollars, all of which was performed without any ardent spirits being used.

All which is respectfully submitted by

Yours, &c.

EDWARD C. SPARHAWK.

Brighton, Nov. 23, 1836.

The Horticultural Society of Philadelphia has offered a premium of $500 for the discovery of the best method of preventing the blight in Pear trees, and $50, for preventing mildew on gooseberries.

Sowing of Grass Seed.

Such Farmers and planters as may not have put in their grass seeds last autumn should do so as soon as the frost is out of the ground. For *clover*, there is but one opinion as to the superiority of spring sowing, and although many give the preference to sowing timothy seed in August, still there are those, whose opinions are worthy of consideration, that advocate the practice of setting it in spring on the growing wheat or rye: so also, indeed, with respect to almost every other of the artificial grasses.

If you intend to sow *clover* seed alone on your grain fields, you should not think of seeding less than from 12 to 16 pounds to the acre.

Timothy, if sown alone should be in the proportion of from 2 to 2½ gallons of seed to the acre.

Rye Grass alone 2 bushels to the acre.

If *Clover* and *Timothy* be sown together, from 10 to 12 lbs. of the former seed and a peck of the latter would not be found too much.

If you purpose carrying your mixture still further, sow 10 lbs. of clover seed, 6 quarts of timothy, ½ bushel of herds grass to the acre,—or

Of *clover* 8 lbs., *orchard grass* 1 bushel, *tall meadow oat* 1 bushel, and *herds* grass ½ bushel.

In Europe the following is in many districts a popular mixture, 2 bushels of *rye grass* seed, and from 12 to 20 lbs. of *clover* seed to the acre.

It is usual to sow the orchard and tall meadow oat in early autumn, but there is no question that they would succeed now. The orchard grass should be moistened with water and permitted to remain so for a day before sowing.

Whatever grass seeds you sow on your winter grain, be sure to pass a light harrow, and roller over them. You need not apprehend any injury to your grain, for although some roots may be dragged out, you will be more than remunerated by the addition you will receive from the tillering of the branches of the plants which will be imbedded in the soil during the process. That the grass seed will derive advantage from being thus securely placed beneath the soil, common sense and reason both concur in affirming. They will be much more likely to escape destruction from birds than if left upon the surface; they will vegetate with greater certainty, and being well fixed in the earth, their roots will be much better able to withstand the drouth of summer and the frosts of winter. We need not say that the operation of harrowing and rolling should be performed when the ground is in a state to bear the treading of the horse without injury, as it will strike the intelligent reader that if done when the ground is *wet*, much injury will result to the grain.

Lucerne.—Those who may feel disposed to try their fortune with this valuable grass, can do so as soon as the ground is relieved from the frost and dampness. It should be sown on a dry rich soil, which had been previously well cleaned. From 16 to 20 quarts of seed should be sown. It may be put in with the spring barley and oats. In England and Scotland it is frequently cut four times in a season.—*Farmer & Gardener.*

Dung.

It is common, at this season, to haul to the fields, the dung destined for the spring crops. Fermentation and waste often ensue before it is buried in the soil. To avoid this loss—we allude to unfermented dung—the dung should be laid in compact piles, of not exceeding eight loads, where most convenient to be distributed, and, as soon as the ground becomes thawed, covered with six or eight inches of earth, and the surface smoothed with the spade. The manure will seldom ferment before the ground thaws. The earthy covering imbibes the gaseous matters, and protects the dung from the wasting influence of the weather. When crops are dunged in the hill or furrow, with long manure, the dung sometimes fails to rot, for want of moisture to bring on fermentation, and is consequently of no benefit to the crop. When the dung is spread broadcast, and ploughed under, this difficulty never occurs, and the dung becomes better incorporated with the soil.—*Cultivator.*

To raise Early Potatoes.

Potatoes exposed to a warm sun a few days before planting, will be a week forward of those planted in the common way.—*New England Farmer.*

On the Quality and Growth of Wheat.

From a late London paper we learn, that Col. Le Couteur, an officer in the Jersey militia, has recently published a small work, "on the varieties, properties and classification of wheat." The details are the results of the writer's own experiments, on his own property. Circumstances led him to make a collection of wheats; and in the course of five years' close attention and research, it increased to upwards of 150 sorts. To show the importance of attending to the varieties and properties of wheat, Col. Le Couteur mentions, that among these varieties, there are some that will thrive better than others in the particular soils and situations adapted to each, all over the kingdom; that one ear of a superior variety, sowed grain by grain, and suffered to tiller apart, produced 4lbs. 4oz. of wheat; whereas, another ear, of an inferior sort, treated in the same manner, produced only 1lb. 10oz.—a proof of the paramount importance of selecting the most productive and farinaceous sorts for seed, the profit of sowing one sort, and the loss resulting from the other being manifest. The writer remarks that his attention was directed to this important subject, by professor La Gasca, Curator of the Royal Gardens at Madrid; that five years since, he accidentally saw about eighty distinct sorts of wheat growing in a nursery garden in Jersey, some seven feet high, some only four, the ears of some being three, others six inches long; and that the professor explained their nature to him. He requested the professor to visit his crops, considering them to be as pure and unmixed as those of his neighbors. To the writer's dismay, the professor drew from three fields, twenty-three sorts—some white wheat, some red, some liver-colored, some spring wheat, some dead ripe, the corn shaking out, some ripe, some half so, some in a milky state, some green. He thereupon became convinced that "no crop, in that state, could either produce the greatest weight of corn, give the largest quantity of flour, or make the best or lightest bread, such as would be produced from a field in an equal and perfect state of ripeness." He then selected the best and most productive sorts of wheat, and secured 14 sorts which he afterwards cultivated with great care and success, showing the great profit resulting from this care and selection, and arguing on the immense consequences to the country, if attention to this subject could be made a national object. The modes by which Col. Le Couteur proceeded and succeeded, occupy large portions of the volume; but the paper from which we have drawn the preceding account, gives no further information.—*Boston Courier.*

Parsnaps—A Field Crop.

The labor and mode of cultivating the parsnep are about the same as those of the carrot. The parsnep produces a larger crop, its average product being rated at 24 tons the acre, and that of the carrot at 12 tons. The parsnep also contains a far greater proportion of saccharine matter than does the carrot, is grateful to the palate of farm stock, and is greatly conducive to their fattening. It possesses another advantage over the carrot, in its hardiness—it may be left in the ground till spring and not be injured by the frost. In the Island of Jersey it forms a regular part of the field system. The roots are fed in a raw state to the hogs and horned cattle; the flesh of the former they are said to render delicately white, and the benefit derived from the latter is in the opinion of many growers, nearly equal to that obtained from oil cake, in point of the weight of flesh, and so superior in flavor that in the island it alway scommands the highest price. Cows fed upon them during the winter months are said to produce butter of a color and flavor equal to that of the most luxuriant grasses. In Jersey 25 pounds are given daily to the cows with hay, and the cream is more abundant than from an equal quantity of milk and the cows differently fed—seven quarts producing as much as 17 ounces of butter.—*Yankee Farmer.*

AN OX, fattened by William Pelt, Esq. of Madison county, was sold for slaughter in New-York, a few days since for the round sum of *one thousand dollars!* It was estimated that the quarters of meat would weigh five hundred pounds each: So says the Journal of Commerce.

COMMUNICATIONS.

Wheat and Chess.

Mr. Tucker—The vexed question of wheat and chess, it appears, will not soon be settled, as no converts are made on either side, the one asserting and the other denying; nor can we ever be fully satisfied until we can ascertain their primitive characteristics, and know what has been the effect of nature, and what the effect of cultivation. Great changes have taken place in the animal kingdom. Who, for instance, would suspect that the plump China and Grass hogs were the offspring of the wild boar? Or who would suspect the fine Saxony and Merino to be the progeny of the coarse wooled primitive sheep? The horse is not less remarkable. View the little, hairy, round legged animal of Lower Canada, and the stately steed of the states of New-York and Pennsylvania, and who could suppose that a few hundred miles could make the great difference? Yet all these are only the effects of keeping, crossing and climate. Nor is this great change confined to the animal kingdom. Plants, too, have undergone great changes. The potato, for instance, which in its primitive state is a small, bitter plant, wholly unfit for use, producing all its fruit on the top of the vine, where the seed is formed in our later varieties of that useful plant, is a striking instance of the great changes that may take place in the vegetable kingdom. The apple is another of the numerous instances where great changes have taken place. How different are our Spitzenbergs, our Gilliflowers, and our Bough Sweetings, and a multitude of others, from the native crab apple; yet all our cultivated apples are nothing more nor less than the product of this unpleasant fruit. But I am straying, and will come to the subject which I intended when I sat down—that of wheat and chess.

And here I will state a few cases of fields of chess which are beyond my comprehension: A neighbor of mine, Mr. D. had a field four or five years ago; the land had been cleared some sixteen or eighteen years, and had lain in pasture from the second year; the first crop being corn, the second wheat, sowed on the corn stubble; the land had a western aspect; had been timbered with maple, beach, and hemlock; a deep soil, strongly mixed with gravel; it was summer fallowed, well ploughed three times, and harrowed sufficiently; the wheat looked fine from the time it came up, no appearance of any being winter-killed; and lo! when it headed, it was probably one half chess, not mixed, but in spots of from one to fifteen or twenty rods of ground; in these spots there was a little wheat, and so among the wheat there was some chess. What became of the wheat which was sowed? Did it die, and the chess then start and grow in its stead? If so, why not all over the field? or how came the chess to stand as even as it could be sowed?

Another instance which I will mention which occurred the same year, on the farm of Mr. H.: This was a low piece of land, but dry, and a rich, gravelly soil; it had been cleared about twenty-five years; had been a meadow for a few years; was turned over in the spring and planted with corn; the next year was sowed with a spring crop, and followed with wheat, which was a first rate crop, yielding probably thirty bushels to the acre; it was then turned over immediately after harvest and sowed again to wheat; the crop looked fine until it headed out, when to Mr. H.'s surprise there was not more than one head of wheat to 10 or 20 of chess, almost the whole being chess. This piece, however, was winter killed, as it is termed.

And hence I hold that wheat and chess are the same plant; chess being the primitive plant and wheat the product of cultivation. I know that many will be ready to oppose this opinion, nor am I insensible of the weight of argument that may be brought against it.

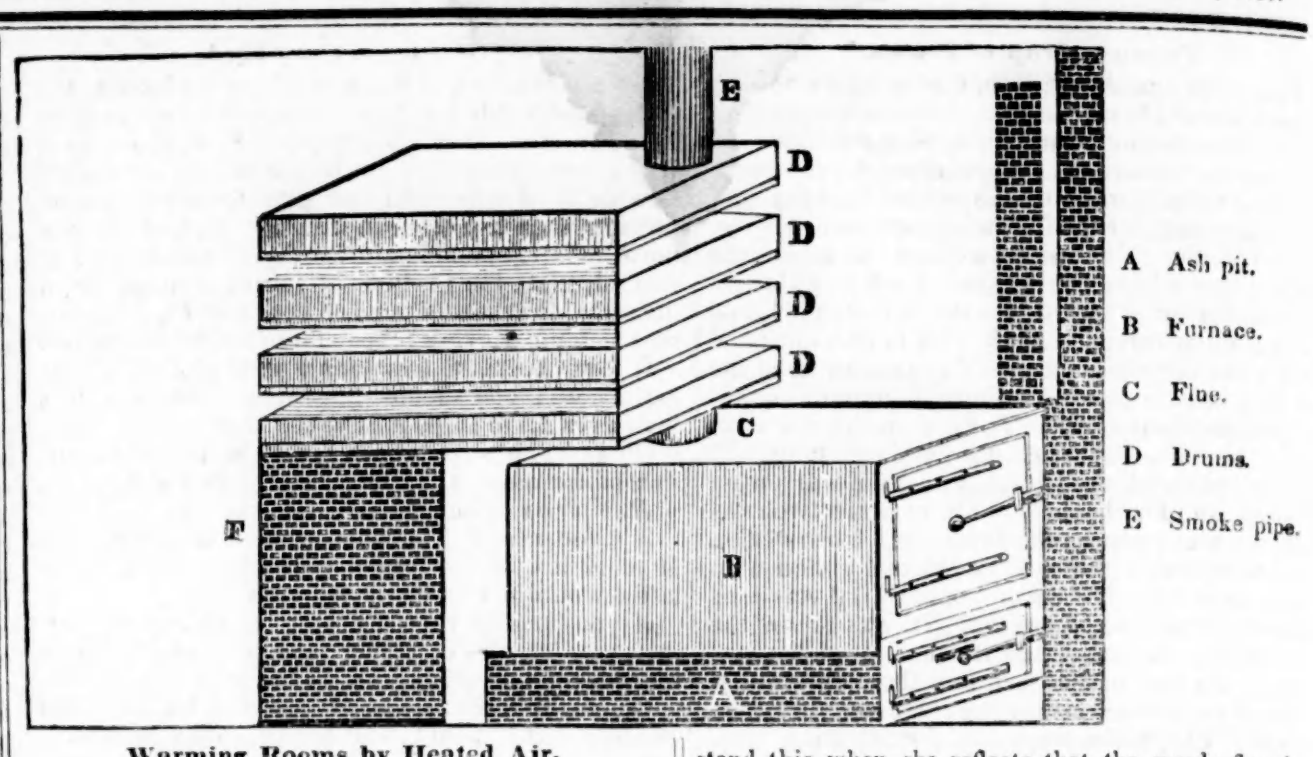
Van Buren.

Onondaga County, N. Y. Feb. 1837.

Inquiry.

Mr. Tucker—I wish some reader of your paper would tell me how to keep my cabbage and onions through the winter, so that they will not rot.

D.



Warming Rooms by Heated Air.

In the figure the ash pit is supposed to be eight inches in height, with a door in front, in which is an aperture for the admission of air.

The furnace above it is constructed of cast iron plates It is three feet in length, eighteen inches in height, and of the same width. A grating upholds the wood.

The flue C is eight inches in diameter, and two inches in height.

The drums D are three feet in length, eighteen inches in width, and four inches high. They are connected by flues at their alternate ends, similar to C. Their number may be profitably increased, if the height of the room will allow. The two upper ones are of sheet iron.

The smoke pipe E may be carried where most convenient. On account of the rapid accumulation of soot, however, the shorter the distance the better.

For the purpose of cleaning the drums, a small door is made in the back end of each. They are supported at the end opposite the furnace by a brick wall, F.

At the distance of two feet from the furnace, a brick wall is constructed around the whole. It is carried up four inches above the upper drum, and is then extended across, supported by bars of iron. Outside of this, and leaving at the sides and top a hollow space of two inches, a wall is built similar to the former.

It will be observed by reference to the figure, that the *inner* wall in front is carried over the furnace, and a space is necessarily left in the outer one opposite the door. On one side of the furnace four or five holes, four inches square, are left through both walls near the bottom. The air passing through these becomes strongly heated in its ascent, by the drums, wall, &c. and is conducted by pipes of tin from eight to twelve inches in diameter, set as nearly upright as possible, to the rooms above. Grates of brass or iron on a level with the floor regulate the quantity of air admitted, and consequently the heat of the room. The furnace should be set in a room in the cellar entirely devoted to the purpose, and the window left open; but if this cannot be done, an air trunk one foot square must be constructed, leading from without the building through the outer wall of the furnace; for few things are more injurious than the breathing an atmosphere loaded with the products of the fermentation of vegetables which are kept in the cellar.

In the end wall, opposite the front, a double sheet iron door is placed, sufficiently large to allow a person to go in for the purpose of cleaning the drums, &c.

The whole cost of this apparatus will not exceed one hundred dollars.

A furnace constructed similar to the one described has been used during the past winter by James C. Hathaway, of this town. It has warmed four rooms and a hall on the ground floor, and the bed rooms above, in the most thorough and delightful manner. No inconvenience whatever has arisen from its use, but at least two thirds the amount of time previously used in the care of those rooms is saved. Every housekeeper will readily understand this when she reflects that the words fire-place, shovel and tongs, andirons, wood, hearth-rug, &c. have become obsolete; that the fire-board is nailed up as in summer, and a truly summer feeling pervades every part of the house, by night and by day.

It will be unnecessary at present to refer to the advantages which the "hot air system" promises, particularly as some of the most prominent ones were pointed out in an editorial article in the first number of the last volume of the Genesee Farmer.

I have heard no objections made to the use of the furnace which could not be readily answered. The principal ones are—

1. On the score of health. A little examination will convince any one that it is *preferable* on this account to any other method, inasmuch as the most perfect system of ventilation is established.

2. "On account of warming feet." An eccentric friend of mine says, "I think when I go into thy house on a cold day, that I must flee to the kitchen fire, but I try to be quiet a few minutes, and behold, the trouble is over."

3. "A fire is so cheerful, so pleasant to look at." If the objector would look at a *book* his uneasiness would leave him; besides, the feeling of drowsiness occasioned by a fire is hardly perceived.

It may, perhaps, be a sufficient answer to all objections, that the "hot air" is gaining ground with all who have any knowledge of it, and that several will probably be constructed the ensuing summer.

Wm. R. Smith.

Farmington, 3d mo. 2, 1837.

Improvement in Sap Boiling.

Mr. Tucker—If I should tell those of your readers who manufacture maple sugar how they can save one quarter of their time, and a quantity of their sugar from burning up, would they care in what kind of style that information was communicated to them? Well, then, tell those who boil in cauldrons or potash kettles, to hang them on a balance—not stationary as my old grand-father used to do, and myself after him, by which means I burned up more or less sugar every year, by leaving too much fire under the kettles, when I left them at night.

Now I lay a stiff pole across two stumps or in two stiff crotches stuck in the ground. I then take another straight pole, 25 or 30 feet long, lay it across the first pole, and hang my potash kettle on the but end of it, about 4 feet from the cross bar. I then put a weight on the opposite end from the kettle, just so that the kettle will balance with four buckets of sap in it. Then after boiling sap all day in my kettles, I can leave as much fire under them as I please without fear of burning up my sugar. In the morning I find my kettles swung up four feet from the fire, with three or four buckets full of syrup in each one. I then take that out and put it in a tub to settle until I want to boil it into sugar. On the above plan twenty-five buckets of sap will boil away from one kettle, while I am asleep.

Musician.

☞ The above was mislaid or it would have been

published some weeks since. The writer will find his name in the next list of payments.

HIGHWAYS—No. IX.

THE SUBJECT OF THE LAST ESSAY CONTINUED.

When roads can be made on declivities, on the sides of hills, with an ascending and descending direction, it is difficult to conceive what advantages can be gained by ploughing and throwing them up. If it were true that throwing up roads and giving them an elevated and convex form, contributed to their security against damages by water, nothing of this would be gained by giving them that form, when they were to be located on the sides of hills. From roads thus located, water, if not obstructed, readily passes off. It is indeed necessary when roads are made on declivities, to open a sufficient number of lateral outlets for water, but ploughing and throwing up, as practiced in turnpiking, adds nothing to the facilities of doing this. We repeat, therefore, that when roads are to be made on the sides of hills, with the direction aforesaid, we can see no possible advantage that can be gained by giving them the distinctive form of turnpikes. Yet in this section of the country an immense amount of labor has been expended on the sides of hills, in giving to roads located there this unnatural and unprofitable form. In all such cases it would, we are confident have been far better to have adopted the plan of making roads which we recommend. In making roads in such places it is necessary only in forming their main central tracks, to give them a good shape and a smooth surface, clearing them in a perfect manner of stones and all other obstructions. We recommend to, in all practicable cases, to smooth the whole area of roads, to clear it of obstructions, and thus fit it for the use of travelers. Not only would it cost much less to construct roads in the manner here recommended, than in the usual way of turnpiking, but the roads themselves would, we have no doubt, be vastly superior in point of excellence.

The objections which we have offered to ploughing and throwing up roads, when they are located on the sides of hills, apply with perhaps equal force to making them in that manner on any other locations, where the ground is dry, and presents no peculiarities of texture or form. We are unable to see what good can be expected to result from ploughing and throwing up roads in any of the cases here supposed. We have already repeated that giving to roads the form of turnpikes contributes nothing to their security against damages by water. On the contrary it certainly does increase their exposure. It contributes nothing to the solidity and strength of roads; but that it produces an effect contrary to this is obviously true. We ask, then, what is the use of ploughing and throwing up roads, in any of the cases here supposed? It is a laborious and expensive process, and when practiced by pathmasters, it is a ready way to dispose of the labor assessed in their districts.

There will, it must be confessed, be found in road making, many locations where our favorite plan of making roads will not be applicable. It will not be applicable in swamps, or on ground lying so low as to be liable at times to be overflowed with water; nor in ravines where the water can have no passage off on either side; nor where roads are to be made on the sides of hills horizontally, requiring dug ways. In such cases, and many others, much sound discretion and much good judgment on the part of the agent entrusted with the direction of the business, will be required. When roads are to be made in swamps, or on ground liable to be overflowed with water, elevations will generally be necessary, and *always*, unless the need of them can be superceded by draining and making outlets for the water. But in general when roads are to be made in swamps, or on low, spungy ground, they will require in addition to draining, a solid foundation of broken stone, and on this should be raised an elevation composed of the best materials that can be found in its near vicinity.

We are satisfied that in making and repairing roads, draining can be introduced to much greater advantage, and more frequently, than has been generally supposed. There are many sections of bad roads in which the fault is not in the texture of the ground, but in the too near approach of living water to its surface. In many such cases relief might be obtained by draining; and it is believed that for this purpose underground drains will generally be found the most useful. Not unfrequently too, water issuing out of the banks of roads, in the form of springs, might be disposed of to admirable advantage, by underground drains. D. B.

Marcellus, Onondaga County, February, 1837.

Chess.

Mr. Tucker—I suppose you will dread to see any thing on the subject of chess; but as the doctrine of transmutation seems at present to have no advocates, yet there are many that believe it as much as they believe their bible; few of such, however, take or read an agricultural paper. It is my aim only to call the attention of farmers to the exceeding fruitfulness of chess. I found a plant of it in my field, of twenty straws, some of which contained 300 seeds; there must have been 2000 in the whole. Now if chess will produce 1000 fold, and one seed in a bushel of wheat be sown; and the second year a thousand in a bushel, and so on for five years, and then suppose the wheat to be mostly winter killed, and the chess to prosper, is it strange that such a crop from seeds which were not known to exist, should induce the belief that wheat had turned to chess? I. W.

Curing Hams.

I have heard complaints from people that had tight brick smoke houses, that their hams did not smoke well, and consequently did not keep in summer. I think I have discovered the whole secret. I have for twenty years used a tight brick smoke house, but have a hole near the roof of four inches square, through which passes a large volume of smoke, and with it all the vapor that is extracted from the meat by the heat of the fire. I stopped the hole last winter, and found my hams to be wet whenever the fire had gone out; the confined vapor became condensed and settled on the meat and walls, until the next fire rarified it again. After a month I thought of the stoppage, removed it, and the hams were soon dry and seasoned, and as good in September as in April. I. W.

Lansingburgh, March 4, 1837.

The Morus multicaulis.

Friend Tucker—I noticed in one of thy Farmers, not long since, an article an the Morus multicaulis, recommending the cutting off the tops of the young trees in the fall, and covering up the stumps, to prevent the winter from killing the roots. I wish to inquire through the medium of thy useful Journal, whether the tops or branches so cut off may not be preserved until spring, and planted as cuttings; and if so, what would be the best mode of preserving them? If this can be done, I see no difficulty in propagating the Morus multicaulis by cuttings, in the hedge form, in our northern climate to any extent, in a very few years, and with a trifling expense. W. S.

Randolph, 3d of 3d month, 1837.

Scientific Principles of Transplanting.

The removing plants from one part of the garden to another is done for various reasons, and the science of transplanting will consequently depend on the intention of the gardener in the operation. The principal facts to be recollected are, that every plant takes its food by the tips of the root fibres, and that the sap thence carried up into the leaves has much of its water and oxygen carried off by exposure to light, particularly to sunshine. It follows that if part or all of the tips of the root fibres be broken off or bruised, the plant will be kept hungry or starved, just as an animal would be, with its mouth much injured or blocked up; while if a plant in such a state is placed in the sunshine, the water and oxygen carried off thereby will very soon cause it to flag, wither and die.

Transporting.—If the gardener's object then be simply to move plants from one place to another, without affecting their growth in any way, it will be important to preserve every root fibre entire; and even, where this can be done, to take it up with part of the soil in which it has been growing, or with a large ball of earth, as it is termed. Where this cannot be done, the root fibres ought to be placed in their new station as nearly as possible in the manner they were at first, and hence dibbling, where the soil is at all stiff, will be bad practice, from its being certain to confine and crush the root fibres within the walls of the dibbled hole.

If it be found impossible to preserve the root fibres from injury, or to replant them exactly as they were, then, in order to diminish the loss of water and oxygen, the plants ought to be shaded from the light, or if that cannot be done, they ought to have a suitable proportion of their leaves [applied to annuals] or branches cut off. De Candolle says this practice was wont to be so universal upon the continent, that the gardener's maxim was, 'if you plant your own father you must cut off his head.' Sir Henry Stewart has proved the bad science of such universal barbarity.

It is important not to plant the roots too deep, so as to be out of the reach of air, or too shallow to expose them to drouth. If the holes are made sufficiently large and deep, so as to have the roots surrounded, when the plant is in its place, by well pulverized surface mould, a tree should not be planted more than an inch deeper than it stood in the nursery. The object of transplanting cabbage, broccoli, &c. is, by checking their growth, to throw them earlier into flower or head. Trees are frequently transplanted, in their young state, by nurserymen, purposely to abridge their long roots, and to increase their root fibres. They are therefore in the best condition for final planting, after they have been one year transplanted, and done well in the nursery. They are then removed with nearly their entire roots.—[*Prof. Rennie.*]

Facts in Agricultural Science.

ANALOGY BETWEEN ANIMAL AND VEGETABLE NUTRITION.

Animal and vegetable matters constitute the food of animals and vegetables; yet these matters nourish neither the animal nor the vegetable, until they have undergone certain preparatory processes, and are reduced to a fluid state. Solid substances, so long as they remain solid, can benefit neither.

The soil is to plants what the stomach is to animals—the recipient of food—where it undergoes its first process of preparation, is broken down and blended with a solvent liquid.

The spongeoles, or small roots of the plants, like the lacteals in the animal, take up the digested food and send it to the leaves, as lacteals do to the lungs, for its perfect preparation as food.

Leaves are to plants what lungs are to animals—the organs of respiration. The lungs retain oxygen and give off carbon. The leaves part with oxygen and inhale carbon, when the sun shines upon them, and imbibe oxygen when it does not. Leaves are, in summer, as necessary to the health and growth of the vegetable, as lungs are to the health and growth of the animal.

Heat, air and water are essential in all the processes of nutrition, vegetable as well as animal.

The ordinary temperature of the animal stomach is 98°—hence animal digestion does not abate for want of heat. The decomposition of vegetable food in the soil, ceases when the thermometer sinks below 40°, and is most active at the temperature of 80°.

Neither lungs nor leaves can perform their office healthfully, without access to fresh air; nor can decomposition take place without air.

Water is a necessary solvent in the preparation of vegetable and animal food for the delicate mouths of the lacteals and spongeoles, and is no less indispensible as a medium of transmitting the food to the lungs and the leaves, and from thence to the animal and vegetable structures.

After the blood of the animal has been perfected in the lungs, it is conducted, by minute arteries, to every part of the body, and is transmuted into flesh, &c. After the sap has been elaborated in the leaves, it is conveyed, in like manner, to every part of the plant, and is then converted into wood, fruit, &c.

Vegetables, like animals, may be injured by an excess of food; and when food is too concentrated, or too rich, the lacteals and the spongeoles become

clogged,and unfitted to transmit aliment to the lungs or the leaves.

A seed may be compared to an egg. One contains the germ of a chick, the other the germ of a plant. Nature has provided in their envelopes the food proper for both, in infancy, and until they can provide for themselves. Through the agency of heat and air, the chick becomes animated, grows, and bursts its shell; and the seed germinates, grows and bursts the earth. Both seem to require the exclusion of light.

The elementary matters found in animals and vegetables are nearly the same—the animal contains the most nitrogen, the vegetable the most carbon. Lime and iron are found in both.

And in both, the power and the habit exist, of throwing off, through their excretory organs, matters blended with their food, not fitted to their wants, or not assimilating with the elements of their structure. Plants often exhale, or give off, like some animals, a strong odor.

As weeds are more commonly natural to the soil than cultivated crops, they are grosser feeders, and consume more food than the latter. Hence they should not be permitted to rob the crops.—*Cult.*

[From the Silk Grower and Agriculturist.]

Cutting Corn Stalks.

Mr. Cooke—Many years ago I was induced by some arguments I heard among our old farmers in relation to cutting corn stalks to make an experiment on the subject. I cut the stalks from a row earlier than usual; then at the usual time for cutting stalks, I cut the row next to it, and the third row I left uncut until harvest time. At harvest time I examined the three rows by stripping down the husks as they stood in the field, and perceiving but little difference, I satisfied myself without either measuring or weighing, for being then but an inexperienced boy, I was not aware of the errors that people might be led into, by leaving a part to guess work; and being trained to the practice of cutting stalks, I could scarcely endure the slovenly appearance of letting them remain on till harvest time, and therefore made up my mind that, taking into consideration the value of the stalks for fodder, we might as well cut the stalks as taught by our ancestors. Agreeably to this conclusion I have practiced a part of the time since, and although convinced that sound philosophy was against me, yet concluded the loss in corn would probably but about balance the saving in stalks, and so contented myself to delay a more thorough investigation, and most likely should ever have remained contented so to do, had I not taken an agricultural paper, for it was in one of these vehicles of information that I read the communication of W. Clark and some others, last summer, on this point, that gave the result of experiments too convincing to pass by without notice. Therefore I was induced to try a more *thorough* experiment than I had before made, the result of which, although contrary from my anticipation, even after having examined it in the field as before, for here we could not believe the difference to be so great, I am constrained to submit for the consideration of your readers, with the hope that *many* of them will next year make a full and fair trial, and that too without guessing at part or all, and having made such a trial will communicate the result to the public, through the medium of your papers and thus not only greatly increase the value of your publication, but establish a fact that may in ten years time be worth millions to our state alone.

The spot selected for my experiment was not at the corners or outer edge of the field, but was chosen within the field, where the soil appeared of equal quality, and the whole being managed alike, except the time of cutting the stalks. Here the stalks were cut from four rows, earlier than the usual time, say about the time the corn was in full milk. Next to these, four rows were left uncut till harvest time, and next to the last mentioned, four rows were cut at the usual time of cutting stalks; that is, when the top had become crisp, and before the main stalk and leaves had perished. At harvest time each parcel was gathered in one day and kept separate till well dried, when the weight was found to be in the following proportion: On the same quantity of ground that produced 133⅓lbs. where the stalks were not cut, I had 100lbs. where they were cut at the *usual* time, and 78lbs. where they were cut earliest, the quality of the corn where the stalks were not cut being by far the best, and the early cut the poorest. In another part of the field a trial was made with a different kind of corn, on two rows, side by side, and the result was nearly similar, but this being a later sort of corn, the frost injured it some, so that the experiment was not so fair as the other.

The season last year was a peculiar one, and the result may be different in a different season, but the subject is one of great importance and should be thoroughly tested. To be sure there is a little trouble attending such an experiment, but what is it? perhaps worth 50 or 100 cents—and what may the experiment be worth to community? this we cannot tell, but it may be vast. Let us estimate a little, founding our estimate on the result of the above experiment.. And here let me remark, the experiment of Wm. Clark above spoken of, gave nearly a similar result.

Suppose a farmer has for 25 years past raised 100 bushels of corn per year on an average, and cut his stalks as has been usual with the greater portion of farmers, he would each year according to our position have had an additiom of 33 1-3 bushels provided he had left his stalks uncut till harvest time; this would be worth about 20 dollars. But here we must take into consideration the loss on the value of the stalks by not being cut. We will say 50 shocks of ten bundles each at 1 cent less than if cut at the usual time is 5 dollars from the 100 bushels. Now the labor of cutting and securing the stalks, more than if left uncut, say 2,50 to be deducted from $5,00 leaves 2,50 for the net loss on the stalks if left to stand till harvest and gathered with the corn. This sum of 2,50 is to be deducted from the $20,00, (the gain in corn) and we have for each year's crop a net gain of 17,50 in favor of not cutting, the amount of which is $437,-50 in 25 years; to this we may add each year's interest at six per cent compound and we have, if my hasty computation be right, about *nine hundred and fifty dollars* which the farmer might have been worth more, if he had not cut his stalks, than he now is, and that too with the consoling idea of having *saved* it and not sponged it from his neighbor, merely by a shaving bargain by which his neighbor is made the poorer. Now if this calculation be right, as it respects one individual, what would be the amount in the same time to the whole state of New Hampshire? Tell me this, reader, if ye can?—*Chesterfield, Feb.* 1836. N. Wild.

Canada Corn.

We consider it proper at this time to call the attention of the farmers in general—and particularly those who have suffered a loss of their crops from the unfavorableness of the past season,—to the yellow early Canada corn, which has been cultivated here with such success, as to leave little room for doubt as to its superiority in overcoming the difficulties to be encountered in our ever-varying climate. Five acres of corn was raised the past season, by Mr. Hatch of the Poughkeepsie Hotel, on his farm two miles below the village. It was planted the first of June last, has yielded sixty bushels to the acre, perfectly sound and in as fine condition as any we have ever seen. We understand that it was perfectly ripe by the 10th of Sept. and will generally come to maturity in about ninety days. The land on which it was raised was in good condition. Mr. Hatch has already been applied to by 54 of our first farmers, for one hundred and fifty seven bushels of this corn for seed next year.—*Poughkeepsie Eagle.*

From the New England Farmer.

Flax for Fodder.

Mr. Fessenden:—If the following remarks are worthy of a place in your useful paper, you are at liberty to publish them. Some years since there was a great scarcity of hay. At that time I had on hand a large stock of cattle. Sometime in the month of February my stock of hay was about all gone, and where to get more I could not tell. It could not be had short of 20 miles, and there at the price of 30 dollars per ton.

One day I went to the stable, and no sooner than I entered, every eye was upon me for aid. You may imagine what my feelings were, when I knew of no relief which I could bestow. I stood awhile to reflect on what course to pursue, or what to do. At last I thought of some flax which had been laying on the beams of my stable for several years, which had not been rotted. I threw down a few bundles, and gave some of the flax to my cattle. They took hold of it with such eagerness, that I was obliged to take it from them to prevent their being choked with it. I then took a block of wood and a broad axe, and chopped it up short. I then gave a very little to my cattle, and continued to do so, until it was all gone.

From what I then discovered of the virtue and oily substance that the flax contained, I am of opinion that what I could take up between my two hands and fingers, after being chopped, and given to a cow each day through the winter, would carry her through the foddering season. My opinion is that the bulk of one ton of hay in flax, will be of more value to a stock of cattle than four tons of hay. I am also of opinion that oil can be obtained from flax. As I have an oil mill, I intend to try the experiment the ensuing season. I would recommend to farmers to sow more seed the coming spring than usual; for flax and the seed are of more value than people are aware of. Stephen Perley.

Meredith, Feb. 20, 1837.

By the Editor.—The use of unrotted flax as food for cattle is entirely new to us, and we have never, before we have received Mr. Perley's communication, heard or read of its being applied to that purpose. We are of opinion that Mr. P. has made a valuable discovery, and are much indebted to him for his communication.

Green Golden Pumpkin.

We noticed this pumpkin last spring, (vol. 2, page 40.) Mr. Moses Winslow of Westbrook, who is very liberal with good things, gave us one of these pumpkins last fall, and as we are informed that it was a good kind to keep, we kept it until within a short time. In quality it is much superior to the common pumpkin, the meat is nearly twice as thick and it keeps far better. They will be very good for stock as they have a soft shell. They are excellent for pies, and we had some bread made by mixing Indian meal with this pumpkin, half and half, it improved the quality very much, and in the opinion of our "better half" it nearly doubled the quantity of bread. This bread is an excellent article for an anti-flour eater. In the notice which we before gave of this pumpkin it is stated that 200 lbs. were raised in 1835 from two seeds; we have only a few seeds of this pumpkin and shall scatter them in small parcels that those who wish may try them.—*Yankee Farmer.*

Use of Garget in diseases of Sheep.

Mr. Holmes—I consider sheep husbandry next in importance to the raising wheat in the best manner in the State. It never will do on most farms to raise our own bread and depend on the sale of wool and sheep to procure the necessary article, but make the sheep conduce to the raising bread and profit by both breadstuffs and wool together with the sale of so many sheep from the flock as can be spared. Nothing that relates to the health of that useful animal, the sheep, can be unimportant. I therefore will take the liberty to state one fact in regard to them. I have a Buck of the best shape, which in years past, has yielded seven pounds of the best well washed wool. I put him out in the fall of 1835 to Amasa Tinkham, Esq. In the month of February following, he appeared diseased and Mr. Tinkham notified me of it, and by the aid of tar put upon the nose and good keeping, he recovered and was returned in tolerable order, in the spring of 1836, but with his advice not to attempt to keep him another winter, as he would certainly die.

During the last summer he became fleshy, and I permitted him to go with my home flock, consisting of more than forty ewes. Early in February his head became stopped up, and he had sore eyes, notwithstanding his nose was well tarred and had been all winter. I renewed the tar however, and opened the skin in his neck, in what shepherds and farmers call dewlop, rather low down, and put in a suitable piece of dry garget and tied the wool together tightly to keep it in. His health very soon became good and has remained so for about three weeks, and it appears likely to remain so. I examined it this day

and found a considerable sore, with the garget still in it.—*Maine Farmer.* ELIJAH WOOD.

Winthrop, Feb. 22, 1837.

Artesian Wells.

M. Mulot, who has the management of the process now in operation at the Barriere de Grenelle, near Paris, for forming artesian wells, has already penetrated 1088 feet without finding water. His contract is to bore as low as 1200 feet; and if no water is found at this depth, the engineer is ready to make a new contract with the city of Paris, to go to the enormous depth of 2000 feet; such a depth has never yet been sounded on the surface of the globe. (*Athenæum*, 1836, p. 740.) If the depth of 2000 feet can be attained, at any thing like a moderate expense, it is probably that a still greater depth is practicable; and if so, water may probably be found in every spot on the face of the earth. The fertility of the most arid deserts would thus be secured, and the whole world rendered one fertile garden. The next step would be to call down fire from the clouds, in the form of electricity, so as to facilitate the operations of cooking, and the driving of machinery.—*Loudon's Gardener's Magazine.*

Lice on Cattle.

"I have found that a strong decoction of tobacco washed over a beast infected will generally drive them away; it sometimes makes the beast very sick a short time.

But a better way is to mix plenty of strong scotch snuff in train oil, & rub the back & neck of the creature with it, which will effectually kill or drive away all vermin from a quadruped.

Mr. John Lane Boylston, in a communication published in the N. E. Farmer, vol. viii. p. 19, recommends white washing the interior of barns, stables, &c. as a remedy for lice in cattle; and likewise advises shearing the ears, and between the horns in the fall before they are put up to hay. He says, in white washing no salt must be used, as is usual in the outside of buildings, lest the cattle should lick it off.

We have also been informed by a gentleman, who has, for many years, kept a large stock of cattle, that fine dry sand scattered on the back, neck, and sides of the animals, is an effectual remedy against lice on cattle. He collects dry sand, and puts it in a box or tub in the barn, and occasionally applies it during the winter, by sifting or strewing it over the body of each creature, with complete success in ridding it of its troublesome guests.—*New England Farmer.*

Machine for Sowing Clover Seed

Every farmer knows how difficult it is to sow evenly, clover and other small seeds—especially in a cold morning, with fingers stiff with cold; that some parts are sown ten times as thick as they should be, and other parts not sown at all.

Farmers also know, in consequence of the weather being windy, they are prevented from sowing 8 or 10 days—and thereby miss the opportunity of sowing at the most favorable time.

Now a machine has been invented, which will only cost about three dollars, that will in sowing a single bushel pay for itself—and with which seed can be sown in windy weather.

With this machine a bushel will sufficiently sow 15 acres. Usually our farmers sow a bushel on from 8 to ten acres. Clover seed is now from $7 to $8 per bushel, so that on each bushel the machine will save from $2 to $3—and save hundreds of dollars to the county of Franklin.

Mr. Richard Woods, carpenter, at the west end of Market-st., Chambersburg, is now making the machines, and will in a few days have them ready for sale.—*Franklin Repository.*

Experiments.

There is no way of making improvements in farming, but by experiments. If the farmer is informed of, or has conceived a different and better method of culture, or management in any branch of his farming, he is to test the goodness of that method by experiments; and if these prove successful he may congratulate himself on having performed an act which is serviceable to his country and honorable to himself.—*Farmers' Assistant.*

To Farmers and Mechanics.

It is well known that the readiest way to kill trees by girdling, is to make the cutting high up the tree. But in cutting over timber land, if the intention is to have another speedy and thrifty growth of timber, the trees should be cut close to the ground, and then vigorous sprouts will start in abundance, and not be likely to be broken by winds or by cattle browsing, as when cut in the usual height of 10 or 12 inches. The sprouts can be thinned out to any desirable distance, to admit the air and sun. The best time to cut for timber is when the sap is down, in mid winter, say December and January. Timber for fencing posts will last much longer by setting that end in the ground which was uppermost as it grew. Trees growing on high, dry and open land are tough—have less sap, and are more solid than such as grow on moist land or swamps. Elm and beach are good and durable timber to be laid under water, and the elm is said to hold a nail under water better than any other timber. Some timber, as the oak, chestnut, and maple decay first internally or at the heart. Not so with the yellow locust, red cedar or white mulberry. These are probably the best timber known for fencing posts. In the scale of durability the yellow locust has the precedence—red cedar the second, and white mulberry the third. Yet many contend that the white mulberry, for fencing posts, are inferior only to the yellow locust. Aside therefore from feeding silk worms with the foliage of the white mulberry, the attention of the farmer is directed to set the white mulberry around the borders of his pasture and other lands, and to cover some of his waste places with the yellow locust, not only for fencing posts but for ship timber. White wood and walnut are tough, and useful for many purposes, but the heart will be brittle.

In order to preserve timber from cracking while seasoning, it is recommended to hew or saw out the timber for the particular purposes wanted, and laid in the *hay mow* when the hay is carted in, and as the hay is fed out, the timber will be found better seasoned than by any process of seasoning by steam or heat in a dry house, and to prevent cracks. This mode of seasoning is recommended to carriage makers when they wish to have a little timber seasoned for some choice work. House joiners also would find it convenient to ensure some seasoned stuff for early spring work. But no mechanic could be more benefitted than the cabinet maker.—*Northampton Cour.*

The Charleston Courier of the 20th ult. says, J. J. Audubon, the distinguished Naturalist, his son, and his friend Edward Harris, Esq. left that city on Friday on the railroad for Augusta. Mr. A. and party intend to visit the Gulf of Mexico, for the purpose of making researches into natural history, to complete his great work, and expects to return to Charleston in the month of May.

EARLY RISING.—Dean Swift says that "he never knew any man to rise to eminence, who lay in bed of a morning;" and Dr. Franklin, in his peculiar manner, says that "he who rises late may trot all day, but never overtake his business."

Agents for the Rochester Seed Store.

OUR distant friends and the public will find a large assortment of Garden, Field and Flower Seeds, which may be relied on as being fresh and genuine, put up and labeled at the Rochester Seed Store, for sale at the following places;

W. & G. BRYANT, Buffalo
G. W. MERCHANT, Lockport
WILLIAMS & DORRANCE, Batavia
GATES, BRADLEY & Co. Le Roy
J. F. WYMAN, Geneseo
J. B DUNGAN, Canandaigua
BOGARTS & WYNKOOP, Geneva
HOLDEN & VINCENT, Oswego

The above gentlemen are authorised to receive orders and payments for us, for seeds, trees, plants, or any other articles in our line. REYNOLDS & BATEHAM.
march 18

Durham Bulls.

A FULL-BLOODED, short-horned Durham Bull, IMPROVED BREED; and one two years old the ensuing spring, five-eighths blooded, will be sold by the subscriber if applied for soon. The purchaser may depend on the genuineness of the stock. Gentlemen wishing to improve their breed of cattle would do well to purchase them, particularly dairy men. JOSEPH SAVAGE.
Syracuse, Onondaga Co. March 10, 1837. mar 18 3t

To Nursery Men.

THE ROCHESTER NURSERY FOR SALE.—The subscribers, contemplating the enlargement of their seed business, and wishing to give it their undivided attention, offer to sell the whole of their Nursery, Garden, and Greenhouse business, including the whole stock on hand, and an unexpired lease of the land.

The Nursery occupies five acres of ground, and consists of about one hundred thousand trees, shrubs, vines, &c. from one to four years old, embracing a good assortment for the market. There is a ready sale for nursery productions in this place, and the whole will be sold on very favorable terms. Or, as a large part of the trees are small, and suitable for transporting, we will sell that part separately to any person wishing to establish a nursery in some other place.

REYNOLDS & BATEHAM.
Rochester, N. Y. March 18, 1837. 4t

WILLIAM ATKINSON, *LAND AGENT*, 17 Exchange-street, Rochester. ☞ Farms for sale.
march 4 6m

White Italian Mulberry Seed.

A FEW pounds White Mulberry Seed, warranted of the growth of 1836; for sale at the Rochester Seed Store. As the supply this year is inadequate to the demand, persons wishing to purchase will do well to improve this opportunity.
march 4 REYNOLDS & BATEHAM.

Choice Seeds for Farmers.

NEW French white Sugar Beet, *imported.*
Mangel Wurtzel, or Field Beet.
English purple Top Ruta Baga.
Large Orange Carrot, *for stock.*
White Dutch Clover, perennial Rye Grass, Lucern, Trifoil, Skinless Oats, Broom Corn, &c. &c. For sale at the Rochester Seed Store No. 5 Arcade Hall, by
feb 25 REYNOLDS & BATEHAM.

Rochester Seed Store—1837.—No. 5 Arcade Hall.

REYNOLDS & BATEHAM having made their arrangements for the season, would inform the public that they are now prepared to execute orders for all kinds of SEEDS, at short notice.

They have just received from one of the most respectable dealers in London, a large supply of English seeds, which were shipped to their order last fall, of the growth of 1836—which, together with their assortment of American growth, renders their present stock the most extensive and complete ever offered in this country. Their experience in the business in this place, and their extensive acquaintance with seed growers and dealers, enables them to obtain the greatest variety of seeds, from the best sources, and on the most favorable terms; as well as to select such as are best adapted to the soil and climate of this country.

Wishing to sustain the reputation of the ROCHESTER SEED STORE, the proprietors are determined to sell only such articles, and at such prices, as will give general satisfaction, and ensure a continuation of the liberal patronage they have hitherto received.

Merchants and others supplied with seeds at wholesale, by weight, or in boxes for retailing, at a liberal discount. Catalogues may be had at the store gratis, or sent by mail if desired. REYNOLDS & BATEHAM.
feb 18

KEDIE & HOUGHTON, Importers of English Field and Garden Seeds, beg to apprize the public that they will offer for sale this month the largest importation of the choicest and best varieties of every kind of Garden and Field Seeds ever offered to the public in Western New-York, all of which have been selected from the most eminent growers in the Old Country, (and of the growth of 1836,) which, together with a large assortment of Seeds of American growth, they confidently submit to the public as being unequalled by any ever offered in any part of the United States, and by adhering to a strict determination of offering no other seeds but the vitality of which shall have been tested, they solicit a share of the public patronage.

K. & H. deem it necessary to state, that Mr. Kedie's intimate connection in England with most of the practical and scientific agriculturists, horticulturists and botanists, with whom he has passed all the former part of his life, gives him an advantage in his selection of seeds for the public good, not surpassed by any other establishment in the Union.

No 6 Buffalo-street, west corner store of the Eagle Block.
Catalogues to be had at the store.
The highest price paid in cash for Grass Seed.
Rochester, Feb. 7, 1837. feb 25

Morus multicaulis Seed.

THE undersigned offers for sale the seed of the genuine Morus multicaulis, imported direct from France by Smith & Sons, New-York, and warranted to be the growth of 1836. Said seed is put up in half ounce papers, and will be sent per mail, free of charge, to any part of the U. S. on the receipt of $3 for one, or $5 for two papers. Notes of all solvent banks received in payment. This seed is warranted to produce the genuine Chinese variety, and the money in all cases will be refunded on satisfactory proof to the contrary. Short directions furnished to each order, for cultivators.

SETH WHALEN, P. M.
feb 25 5t Whalen's Store, N. Y.

Morus Multicaulis.

JOSEPH DAVENPORT offers for sale 50,000 plants of the true Chinese Mulberry, or Morus multicaulis. Trees will be carefully packed and forwarded as early as desired. Orders must be sent to Colerain, Mass. till the 15th of March; after which time to Hartford, Ct. All inquiries will be attended to at his plantation, 5 miles south-west of the city. Early orders only will be supplied, as arrangements will be made to use all not called for soon.
Colerain, Jan. 23, 1837.

Notes on Silk, &c.

We have received a copy of Mr. Kenrick's "Abridged Catalogue, 1836 and 1837," to which is appended "Notes on Silk and the mulberry Tree," containing many interesting facts and much useful matter relating to the silk growing business. We make the following extract and may hereafter avail ourselves of the privilege given us by the writer, of publishing the remainder.

In China, in India, in Persia, and Turkey, and at this day in France, the mulberry is raised in hedge rows, not being generally allowed to rise higher than six or eight feet. By close planting in hedge rows, and by careful cultivation, the land is wholly covered in the shortest possible space of time with a large mass of foliage, yielding a profit both sudden and more immediate, a produce even far more abundant than from full grown trees. This same system is now gaining ground in Belgium and in Italy. Thus half the labor of gathering the food is saved, and the tedious cultivation of many long years.

The trees may be set in rows eight feet asunder, and three feet distant in the row; two thousand will thus be required to the acre; the cart-ways transverse; and the ground being cultivated as a garden, the leaves may be gathered in the fifth and sixth years. In stripping the leaves, those at the tip ends of the twigs are always left. In hot countries the silk worms are fed wholly on *prunings*, as the leaves thus for a long time preserve their needful freshness and moisture.

John P. Cushing, Esq., a gentleman who has resided many years in China, has stated, that the most approved mode of cultivating the mulberry, as practiced in many parts of that country, consists in keeping them low by annual prunings, like plantation of raspberries. The same mode, according to Mr. Loudon,& also M. Bonafoux,is practiced in India. This system of close planting and low pruning is in perfect conformity with the highly approved mode of management, which is now so extensively adopted with the grape vine, in vineyard culture, in modern France.

The profit of raising silk depends in a measure on the care which the silkworms receive—on the full-fed crop, and the production of *large cocoons*. The silk being formed wholly from the *surplus food* which the silkworms consume, over and above what is necessary to sustain life: moreover, these large cocoons produce a *strong fibre*, not liable to break in reeling. Cocoons weighing 200 to the pound are called very large: and of good cocoons, 2400 will yield a pound of reeled; but of very large cocoons a much less number will suffice. In Europe, and with *ordinary management*, 250 cocoons on the average weigh a pound; and 120 pounds of green foliage, and sometimes 150 pounds, are was ted or consumed, and 2800 cocoons are required for a pound of reeled silk. Yet by *suitable management, and economy in feeding*, Count Dandola was enabled to procure, in Dalmatia, one pound of cocoons from ten pounds of leaves, and in the proportion of one pound of pure reeled silk from eight pounds of cocoons. These last examples are stated as *extraordinary cases*, serving only to show what *has been done:* it has however been proved, that eight pounds of good *American cocoons*, with care and skilful management, will yield a pound of pure reeled silk of the strongest fibre.

An ounce of eggs produce 40,000 silkworms, and from this quantity M. Henry Boudon, of Ris, in the north of France, was enabled to procure in 1835, by *suitable management*, the unusual product of 170 pounds of cocoons. I have elsewhere calculated the produce of an acre of trees in hedgerows, after being six years transplanted, at 21,600 pounds of foliage; but others have estimated the produce at twice, thrice and even quadruple this amount. By skilful and successful management alone, I have shown that these 21,600 pounds of leaves, the produce of an acre, with economy in feeding and skill in reeling, may be made to produce 270 pounds of pure reeled silk,worth,at the present advanced rate, $5 a pound, or $1350. Elsewhere, and with *ordinary management*, I have put down 180 pounds of silk as the produce of a well-cultivated acre, at but six or seven years of age.

In the usual mode of feeding, it must be remarked that more food than I have here stated, is required, much being wasted. And ordinarily, it is estimated that 1,000,000 silkworms will produce 333 pounds of reeled silk, the cocoons being of a size requiring 3000 to the pound: and many have estimated that all these may be maintained on a single acre. The labor of attendance required for 1,000,000 silkworms is estimated by good judges as follows:—In the first week 2 persons; the second week 4; the third week 8 persons, for the remainder 15 or 20; or 278 days; the leaves being gathered from large trees. Most of all these, being girls, boys, and aged persons, may be hired at a low price.—But a far less number would suffice, the food being gathered from hedges; or when successive portions only of the silkworms are hatched at a time, and a succession of crops produced.

At the experimental silk farm of the government of France, M. Beauvais had adopted with the most signal success, the new and most perfect system of ventilation of M. D'Arcet; the extraordinary results of which were published in 1835, in a report by the chevalier Soulange Bodin, in the name of the Committee of Agriculture.

In this magnanerie, although situated in a northern climate, and a country liable to cold storms, no fires are ever admitted within the apartment of the silkworms; as these fires rob the air within of the needful moisture and consume by combustion its vital principle. Excess of cold, which in that climate is not unfrequent on particular days and seasons, is rectified by currents of warm air admitted from without. These currents are admitted from a narrow apartment or air-chamber,which is situated in the cellar,and warmed by a small closed furnace. Horizontal pipes of suitable dimensions, convey the air thus rectified, beneath every part of the vast magnanerie, into which it enters upwards through numerous circular openings beneath the stagings. Thus both the cold air and the impure air is driven upwards by these ascending currents, until it finally escapes through the numerous and corresponding openings in the roof.

By the continual exhalations from the innumerable bodies of the insects thus closely congregated, as well as from their litter, the air of a large magnanerie becomes quickly contaminated, impure, and unfitted for respiration. And thus an atmosphere which is either too moist, or too dry, too hot and sultry, or too impure, may be expelled, and replaced by fresh and healthful currents conducted from beneath, of the suitable quality and temperature, and the healthful circulation which sluggish nature withholds is restored.

One pound of silk, well reeled, is capable of being converted into 16 yards of the ordinary quality of *gros de Naples*, or into 14 yards of the first quality; and manufactured silk goods are usually worth their weight in silver.

Much of the profit of raising silk also depends on the *reeling*. In the upper department of Ardeche in Normandy, a description of white silk is produced of a quality so superior that it is sold to the lace manufacturers for more than 50 francs ($9,20) a pound: but a few years since it commanded 150 francs or $27,60 a pound. The silk of Cevennes in France, says Dr. Ure, in his celebrated treatise, is the finest in the world. At Cevennes, when the cocoons are 7-8 wound, the filament becoming exceeding minute and fine, they are cast out, and replaced by new cocoons. There is indeed one kind of this silk which is sold at Lyons for from $3.09 to $4.23 the English pound; but the kind which is still finer brings $8.88 a pound. 400,000 pounds of silk of superior quality were raised in Cevennes in 1832, and since that period the quantity has been greatly increased; "as among all employments of capital, none is found so productive as the mulberry tree. It was yielding at the above period from 15 to 20 per cent. profit to the intelligent agriculturist." To this statement of Dr. Ure, let me add, that since the commencement of the present year, so great is the continually increasing demand, that the price of raw silk has risen throughout Europe from 30 to 40 per cent.

The culture alone is wanting to render the less fertile sections of our fine country rich. Before the introduction of the mulberry into the less fertile districts of Languedoc, in France, the inhabitants, it has been stated, were miserably poor, though now they are among the richest in the kingdom. A dry upland and not a very rich soil is there found to be advantageous to its growth.

The whole value of silks manufactured annually in France, amounted in 1835 to 140,000,000 francs; and it was estimated that in that year, silks to the amount of 50,000,000 francs, were exported from that country to the United States alone.

Yet in France, although they raise so much silk, they still import annually, to the amount of 43,000,000 francs of raw silk, or nearly one-third of all they consume, for the supply of their manufacturers.

In England, the climate, from the humidity, or other causes, is found to be unsuited to its growth: for this reason alone, the trials to raise it there have failed. Yet from 1821 to 1828, they imported of raw silk 24,157,568 pounds, worth $120,787,580. Of this amount $59,881,283 came from Italy alone. So lately as 1835, the silks which were consumed in Great Britain alone, amounted to the enormous sum of $28,282,582 annually, *at the wholesale prices*, while the small amount of $2,828,528 was all they exported.

The value of silks imported into the United States during the years ending Sept. 30, 1835, as stated on the authority of the Hon. William Jackson, member of congress from Massachusetts, amounted to $16,497,980; this being the original or first cost in the foreign country. During this period, only $486,562 worth of this great amount was exported; and the actual cost of the above, to the American people, or the *whole retail cost to the actual consumer*, may be fairly estimated at more than $22,000,000 for the year. Most of all this was imported from Italy, Switzerland, and from France: formerly half our imports were from China. Yet neither the articles of raw silk, nor any of those numerous, substantial, and elegant fabrics, which are composed of part silk and part cotton, or of mixtures of silk and worsted, are included in the above amount. And the demand for silks, which is now so great, is continually increasing. Not half this amount was consumed six years ago; and since 1821, and during fifteen years, the annual amount of silks consumed has doubled twice.

Silk is believed to be emimently adapted to the soil and climate of every division of the great republic; our serene atmosphere is peculiarly favorable to its growth, and the prolonged and vigorous state of vegetation, during our summers. The genial climate for silk is ours, and the highly favored soil of one whole continent of the great western world which by an especial providence, with the exception only of Mexico, has fallen to our share, and is ours exclusively.

Our advantages are indeed very great—to be duly appreciated, they must be estimated singly, and individually; how much greater and more striking will they then appear, if considered collectively—Our innumerable rivers and rapid streams, our immense forests and mines, the exhaustless treasure of fuel and of flame, the combined elements of water, earth, of fire, and of mighty power, await—offering resources unknown and immeasurable,and willing aids in abridging the labors of man.

History will record to endless remembrance the names of those illustrious individuals who have persevered as the faithful guides and pioneers in the great work—those who by their example or writings, have served as lights, to illume our way, and to cheer us through the long, dark, and dreary night.

Hope dawns auspicious, the day and its brightness will be ours: endowed, as are our people, with fortitude, with energy, and with intellectual resources unsurpassed, is there one American who can doubt?

By those unceasing toils, and mighty efforts, and matchless labors, for which our people are so distinguished, the millions thus recovered will not only be their just reward, but will add to the substantial wealth of the nation and to the glory of the whole republic.

If those who sow their clover seed on wheat and rye, were to harrow and roll it in, both the grain and grass would be greatly benefitted: this work, however, should never be performed while the ground is wet.

Examine all your tools and implements, and if not in order, have them forthwith repaired, don't have to send your plough or your harrow to be mended when wanted—always be in advance of your business.